Claim 49 (new):

The method according to claim 1, wherein at least one of the cladding material and the core material comprises one or more diffusible additives, wherein the one or more diffusible additives modify the ~~reaction~~ refractive index of the at least one of the cladding material and the core material.

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Claim 50 (new):

The method according to claim 49, wherein at least one of the one or more diffusible additives increases the refractive index of the at least one of the cladding material and the core material.

Claim 51 (new)

The method according to claim 50, wherein the at least one of the one or more diffusible additives is selected from the group consisting of benzophenome, biphenyl, 3-phenyltoluene, diphenyl sulphide and 1,2,4,5-tetrabromobenzene.

Claim 52 (new):

The method according to claim 49, wherein at least one of the one or more diffusible additives decreases the refractive index of the at least one of the cladding material and the core material.

Claim 53 (new):

The method according to claim 52, wherein at least one of the one or more diffusible additives is selected from the group consisting of: tributylphosphate, triethylphosphate, glycerol triacetate, methylperfluorooctanate, and perfluoro2,5,8-trimethyl-3,6,9-trioxadodecanoic acid methyl ester.

Claim 54 (new)

The method according to claim 1, wherein at least one of the optical fibers is a graded-index optical fiber.

Claim 55 (new)

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The method according to claim 1, wherein the optical fibers are ~~grade-index~~ graded-index optical fibers.